

Update on Border Controls and Biosecurity

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Outline

- Threats at the border
- International and national legislative framework
- Border options
- Ebola case study

What are the threats?

- Communicable diseases:
 - Quarantinable diseases SARS, MERS, Ebola, Yellow Fever, Plague
 - Other notifiable diseases: polio, measles
- Other biological threats
 - mosquitoes, rodents, other pests, black widow spiders, venomous species
- Radiological Threats
 - Fukushima, polonium
- Chemical threats
 - batteries, bombs, hazardous substances

Legislative Frameworks

- International Health Regulations 2005
 - all hazards
 - entry and exit of public health risks
 - core capacities at all times
 - core capacities in emergencies
- Health Act 1956
 - quarantine (border) provisions
 - communicable disease (post-border) provisions
 - drinking-water
- Other legislation
 - Biosecurity Act (risk goods, animals, ballast water)
 - Radiation Protection Act (ionising radiation sources)
 - HSNO Act (chemicals, graphic materials)
 - Food Act (food safety, airline meals)

Is a Border Response Needed?

- What does WHO advise? Is it a PHEIC?
- What is the threat to NZ?
- What is the evidence? How effective will be the proposed response?
- Public health benefits? Costs and resources required? Feasibility of measures? Ethical issues?

Risk Assessment

- What do we know about the threat? What is the risk:
 - virulence, infectivity, mortality, morbidity, incubation period, country of origin, effects on risk goods
- Ongoing monitoring and review
- Effectiveness and feasibility
- Acceptability and views of stakeholders
 - lawful, ethical, credible, public/industry compliant, other considerations

Border Options

- health alerts, information and advice
- passenger self-reporting
- screening of (targeted) travellers or flights
- isolation of symptomatic travellers
- offering treatment, vaccination
- contact tracing
- quarantine of contacts
- exit screening [to Pacific Islands]
- travel advisory
- quarantine people from affected countries
- regular point of entry workforce
- risk goods

Case Study: Ebola Virus Disease

- First Ebola outbreak outside Central and East Africa, affecting Guinea, Sierra Leone, Liberia
- Cases are spreading across borders simultaneously
- People are being infected in the urban areas
- More people infected and killed than any other outbreak

Public Health Emergency of International Concern

8 August 2014: WHO

- declared the outbreak in West Africa to be a Public Health Emergency of International Concern
- issued a series of recommendations for
 - countries with EVD transmission and
 - countries with a potential or confirmed EVD case and/or with land borders with affected countries
- intended to contain the outbreak and prevent further international spread.

WHO Recommendations for Other Countries including NZ

- no general ban on international travel or trade;
- restrictions on travel of cases and contacts;
- provide travellers to affected areas with information;
- be prepared to detect, investigate, and manage cases (including arriving travellers);
- information for the public;
- be prepared to facilitate the evacuation and repatriation of nationals (e.g. health workers) who have been exposed.

Cases in Countries outside Africa

- Spain: 1 case, 0 deaths
 - 1 healthcare worker, recovered
- USA: 4 cases, 1 death
 - 2 healthcare workers, both recovered
 - 1 (imported) healthcare worker, recovered
 - 1 (imported) case, died
- Australia: no cases
- UK: 1 case, 0 deaths
 - 1 (imported) healthcare worker, recovered
- Canada: no cases
- high public perception of risk

Threat Assessment

- likelihood of importation to NZ is extremely low:
 - geographic isolation
 - no direct flights
 - low traveller numbers
 - only contracted through direct contact with infected bodily fluids
 - not spread through the air (coughing)
 - no reports of cases from air travel

Border Health Measures

- WHO does not recommend travel or trade restrictions for countries like NZ
- BAU:
 - Captain reports traveller with (WHO/IATA) symptoms of concern
 - public health response initiated

Low Level Border Surveillance

- Customs check arrival cards for travellers who visited Guinea, Sierra Leone, and Liberia in the past 30 days.
- Customs officers ask seven questions and ...
 - 'yes' to any question the traveller waits for a health officer to talk with them; border response protocol activated.
 - 'no' to all questions, traveller given health advice card.
- Nearly all arriving travellers will notice no difference.

Screening Questions

1. Are you experiencing any symptoms of fever, muscle aches, vomiting or diarrhoea?
2. Have you been in direct contact with someone who has had Ebola or was suspected of having the disease?
3. Were you living in a household with someone who has had Ebola Virus Disease?
4. Were you providing medical care to an Ebola patient?
5. Were you working in a laboratory and having exposure to Ebola samples?
6. Have you participated in a funeral which involved direct contact with the deceased body?
7. Have you assisted with the response to Ebola in an affected country?

Contacts

- Casual (no direct contact) eg:
 - travelling on the same aeroplane
 - residing in the same hotel
 - visiting the suspected case's home
- Direct contact (low risk) eg:
 - living with case, skin-to-skin contact (eg, hugging)
 - passengers seated +/- 1 seat in all directions
 - possibly crew who have provided in-flight service in section of craft where suspected case was seated

Important message from the New Zealand Ministry of Health

Kia Ora, welcome to New Zealand.

If you get **sick** within a **month** of arriving in New Zealand, please seek **medical advice** as soon as you can.

Telephone the **free** Healthline on **0800 611 116** or contact a doctor.

It is **important** to tell them that you have been **outside New Zealand** recently.



New Zealand Government



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Tell the health professional if you have a **temperature** of **38°C or higher** and **one or more** of the following **symptoms**:

- ongoing coughing
- difficulty breathing
- ongoing diarrhoea
- ongoing vomiting
- skin rash
- bruising or bleeding without injury
- looking obviously unwell
- confusion.



Direct Contacts (High Risk)

- exposures:
 - direct contact with mucous membrane (kissing, sexual contact), secretions, excretions, blood, tissues or other body fluids, being breastfed by a case.
 - needle-stick injury.
 - contact with dead bodies of cases.
 - preparing and/or eating bush meat.
 - possibly family/friends travelling with case during symptomatic period.
- self-monitor temperature and other symptoms
- generally no limitations to activities while person remains asymptomatic.

People Returning from Assisting with the Response

- self-monitor temperature and other symptoms
- generally no limitations to activities while person remains asymptomatic
- no return to clinical duties until 21 days after leaving affected country

Lessons Learned

SARS, Swine Flu, Measles, MERS, Polio, Ebola

- Information for travellers most effective
- Few cases detected at the border
- Thermal imaging doesn't work
- Closing the border is not feasible
- Interagency collaboration essential
- Responses need to be flexible
- Costs and benefits, unintended consequences

Key messages

- All hazards: biological (pests and diseases), chemical, radiological
- International Health Regulations 2005, web of NZ legislation
- Border responses: proportionate and evidence based, internationally consistent
- Most effective: information for travellers, screening, contact tracing, multi-agency response, flexible

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